

July 10, 2002

Introduction

This document outlines the business needs identified for the Washington Transportation Framework Project (WA-Trans). It provides high-level context information and then business needs in enough detail that business requirements can be derived from them. The needs are identified by the function which will use them. The documentation includes the source of the identified need as well as the specific partners who may share the need or contribute to meeting the need.

Background

The transportation framework is one theme of the total framework concept. In the 1990s it was recognized that the cost of producing Geographical Information Systems (GIS) data was prohibitively high and that duplicate data was proliferating. In an effort to be more efficient the framework concept was born for GIS in the Federal Geographic Data Committee (FGDC) of the United States Geological Survey (USGS). There are several themes, of which transportation is one. Other themes identified by the FGDC include elevation and bathymetry, hydrography, geodetic control, cadastral, government units and orthoimagery. The goal is for these themes to work together to provide a complete picture of the data. The Washington Geographic Information Council (WAGIC) has sponsored efforts to work on specific themes in the state of Washington. Efforts have been made in the cadastral, hydrography and orthoimagery themes. The transportation effort is not a new one, but it has new momentum with a full-time project manager and a new effort at formally defining business needs, requirements and functional specifications. This document defines business needs.

Vision

The Washington State Transportation Framework is a seamless set of data that are consistent, connected, and continuous between segments of the transportation framework and with other framework layers. The transportation framework represents the best data available and includes mechanisms to improve over time. Framework data is accessible to the general public at the least cost with the least restrictions.

Business Opportunity

It is expected that this document will completely outline the business opportunity. These opportunities can be divided into specific business functions. Functions which have could derive a business opportunity for the transportation framework include: Transportation Planning, Emergency Management Planning, Emergency Management Routing, Transportation Project Scoping, Transportation Project Design, Transportation Project Construction, Transportation Operations, Transportation Maintenance, Emergency First Response, Environmental Impact Analysis, Freight Routing, and others. WA-Trans will allow for sharing of data and reduce the duplication of data. It will also facilitate data consistency across the state.

Value Provided to Customer

The customer will have access to data regarding various modes of transportation including roads, rails, airports, ferry terminals and routes and ports for the whole state. They will have the ability to attach their own data to this so they can see their data in relationship to the statewide transportation systems. The customer will be able to rely on transportation data outside their own jurisdiction when developing applications. The framework will provide a standard, which will facilitate data exchange. The ability to do this exchange will increase business opportunity and reduce costs of duplicate data production and data inconsistency.

Business Risk

A complete separate risk assessment is being developed and maintained. Some key risks include: Lack of stakeholder participation leading to a standard and framework that won't be used, lack of resources and funding at key stages to complete the work, making the framework serve too many specialized functionalities, thus leading to high risk of failure or a framework which is too specialized to be universally useful. There are many other risks that are included in the risk assessment. The major risk of not developing this framework is the significant cost of duplication

WA-Trans Business Needs Document

July 10, 2002

of data, the costs resulting from incorrect data, and the lost opportunity of being unable to utilize cross jurisdictional data in a cost effective manner for applications.

Assumptions

1. Sufficient partners representing data providers and data users participate in the project. The exact number is uncertain, but there should be a representative participation from the various groups who will be primary data providers and/or primary business users of the product.
2. Funding and resources are available from partner organizations for a project manager, data modeling, software development and maintenance.
3. Key staff resources with the necessary technical ability are available and can be scheduled to complete project tasks. While it is not yet possible to completely define the technical ability required it is assumed that when this is defined the ability will exist to provide or acquire these resources.
4. Agreement can be reached on a common data model.
5. Agreement can be reached on a common linear referencing system if one is needed.
6. Technical capabilities of the software, hardware, and resources are available to support business needs.
7. A phased approach will be utilized to develop the framework incrementally.
8. Existing infrastructure will be used to make transportation framework data accessible.
9. The transportation framework project and other framework projects will be coordinated.
10. The first implementation of the framework will be simple and a plan will exist for increasing complexity and functionality over time.
11. Sufficient business value will be discovered and documented to compel participation in building, using and maintaining the WA-TRANS.
12. Pilot test results will represent the statewide situation enough to use these results to determine approaches.
13. When pilots are successful the results will become part of the framework implementation.
14. Negotiation, compromise and facilitation will be utilized to arrive at implementation priorities. Funding source may be considered a key issue in deciding such priorities.
15. A steering committee will be organized for the project that will have the authority in their individual organizations to access resources and possibly funds to assist with the various phases of the project. The size of this steering committee will be dependant upon what is required to get adequate representation for different business areas. However at this time it is hoped that steering committee will be limited to 13 members including the project manager.
16. Membership of the steering committee may change as phase deliverables change.
17. The steering committee will be able to participate to the level of providing detailed analysis and decision-making about business requirements, functional requirements and prioritization of requirements. The steering committee will also be available at least once a month for meetings in order to facilitate change management and issue management.
18. The steering committee will be representative of the Washington Transportation Framework Stakeholder Group.
19. The steering committee will be small enough to facilitate effective decision-making.
20. Any project plans for implementation will include plans and funding sources for maintenance of what is implemented.
21. WAGIC and FMG will assist with pursuing funding.

Scope and Limitations

Scope of the Initial Release

To be determined by the WA-Trans Steering Committee.

Scope of Subsequent Releases

To be determined by the WA-Trans Steering Committee.

Limitations and Exclusions

To be determined by the WA-Trans Steering Committee.

Customer Profiles

WA-Trans Business Needs Document

July 10, 2002

The project has various customers, which have been identified. There have been several customer categories identified. However, this data has wide usefulness and many potential customers may remain unidentified. Specific customers participating both outside and in WSDOT are identified. Customers identified so far include:

Federal Agencies include:

- US Bureau of Land Management,
- US Census Bureau,
- Federal Highway Administration,
- US Forest Service,
- US Geological Survey.

Washington State Agencies and organizations include:

- Center to Bridge the Digital Divide at WSU,
- County Road Administration Board,
- Department of Natural Resources,
- Enhanced 911,
- State Parks,
- Utilities and Transportation Commission,
- Washington Geographic Information Council (WAGIC),
- Framework Management Group,
- Strategic Freight Transportation Analysis Project,
- Information Services Board Geographic Information Technology Subcommittee
- Department of Transportation (WSDOT),

Divisions or functions within WSDOT specifically interested at this time include:

- Bridge Preservation Office,
- Design Office,
- Emergency Management Office,
- Environmental Affairs Office,
- Highways and Local Programs,
- Interactive Transportation Systems (TRAC),
- Office, Program Management,
- Planning Office,
- Public Transportation Office,
- Rail Office,
- Regional Project Engineers office (Scoping function),
- Transportation Data Office,
- Transportation Demand Management Office,
- T2 Program,
- Urban Corridors,
- WSF Council for Disaster Planning,
- WSF Terminal Engineering.

Local organizations include:

- Association of Washington Cities,
- City of Spokane,
- City of Monroe,
- City of Tacoma
- Clallam County,
- Clark County,
- Community Transit (Snohomish County),
- Douglas County, Island County,
- Kitsap Transit,
- Mason County,
- Pierce County,
- Port of Seattle,

July 10, 2002

Puget Sound Regional Council,
Spokane County,
Thurston County.

Private Organizations include:

Environmental Systems Research Institute Inc. (ESRI),
Longview Fibre,
RF Weston,
Washington Forest Protection Association.

Project Priorities

To be set by WA-Trans Steering Committee.

Project Success Factors

Establish broad participation.

Identify and recruit partners who:
Can identify a business case for investing in the transportation framework,
Represent a range of uses of the database,
Are needed to create full data coverage.

Establish standards, which enhance the will and ability of partners to collect and maintain the data.

Match the standard to the ability of the partners to collect and maintain the data.
Identify a standard which allows data quality to improve over time.
Identify funding incentives for partners to participate.

Provide the data needed to meet business and analytical needs.

Data must be:
Accurate.
Complete.
Not too complicated to use.
Described.
Up-to-date.
Relevant to business and analytical needs.

Define a data model that partners agree meets their needs.

Identify business needs and functional requirements, and define the data needed to support them.
Examine existing data models.
Seek consensus agreement on the data model. Partners commit to achieving consensus.
Provide frequent and on-going communication of progress and decisions to partner organizations.

Identify the right standards and processes.

Identify standards and processes needed to meet business needs.
Examine existing standards and processes.
Identify standards and processes needed to facilitate integration of data from multiple sources.
Identify standards and processes, which facilitate maintaining the data long term.

Identify standards and processes that recognize the capabilities of existing technology to support the standards and processes.

Identify standards and processes that recognize the capabilities of existing technology to support the standards.
Provide tools for data integration, data access, and metadata.

July 10, 2002

Phased Development

Set the scope of phases to allow delivery of tangible products within a set time frame.

Use phases as a method of showing an effort and plan to meet all business needs while focusing on the ones, which can most realistically be met at the current time.

July 10, 2002

Business Needs

The business needs are defined as high level needs described in business terms. Each business needs is documented as follows:

BN #: This is a number assigned to each business need. At this point these number are subject to change. When stakeholders approve business needs as substantially complete or correct a “permanent” number will be assigned with room to insert new numbers if needed.

Title: The title is a short descriptive name used to identify the need.

Description: This is a description of the business needs described in business language to be understandable to most who may read it. It includes enough detail to extract business requirements from.

Business Functions Using: This is a list of generic business functions which may use WA-Trans to assist in meeting this need. It is not defined by specific organizations.

Source: The provider of the original business needs identified.

Specific Partner Use: This is similar to the “Business Function Using” except it identifies a specific partner involved in WA-Trans who may find using WA-Trans to assist with meeting this need useful.

BN: 1.0

Title

Survey Data

Description

Project Engineers involved in scoping and designing a project (transportation infrastructure) would like to know what areas have been surveyed by county and local governments and other parts of WSDOT and access to that data to avoid resurveying the same area.

Business Function Using

Public works, Transportation construction projects

Source

WSDOT Olympic Region Lacey Project Engineers Office

Specific Partners Use

WSDOT, County Governments, City Governments

BN: 2.0

Title

Future Plans for Transportation Infrastructure

Description

Organizations need to know the plans of other organizations regarding building or modifying transportation infrastructure including sidewalk plans as soon as they were estimated and this data needs to be geocoded. Information needs to include road segment or structure involved. This would facilitate communication and help planning in a more proactive and mutually supporting way.

Business Functions Using

Public works, Transportation construction projects, business developers, E-911, transit organizations

Source

WSDOT Olympic Region Lacey Project Engineers Office, WSDOT Environmental Affairs Office, WSDOT Olympic Region Highway and Local Programs Engineer, WSF Terminal Engineering Office, WSDOT Highways and Local Programs

Specific Partners Use

WSDOT, County and City Governments, E-911, Puget Sound Regional Council, FHWA

July 10, 2002

BN: 3.0

Title

Railroad Line Information

Description

A variety of information about rail lines is needed. Included in this is: track locations,
Where tracks intersect roads,
What type of crossing controls there are at intersection,
Safety rating of intersection,
Whether the track is abandoned or active,
Location of rail bridges, tunnels and potential mud slides locations along railways,
Ownership of rail lines (specific tracks).

Business Functions Using

Public Works, Transportation construction projects, planning, E-911, WSDOT Bridge Preservation Office, MPOs, RTPOs, Emergency Management, WSDOT Transportation Data Office, WSDOT Rail Office

Source

WSDOT Olympic Region Lacey Project Engineers Office, WSDOT Rail Office, WSDOT Bridge Preservation Office

Specific Partners Use

WSDOT, County and City Governments, E-911, WUTC, PSRC,

BN: 4.0

Title

Recently Completed Projects

Description

Data on specific projects recently completed which could be queried by a specific time frame and location.

Business Functions Using

Public works, Transportation construction projects, business developers, emergency response, transit organizations

Source

WSDOT Olympic Region Lacey Project Engineers Office, WSDOT Urban Corridors Office

Specific Partners Use

WSDOT, County and City Governments, E-911, Puget Sound Regional Council, FHWA, USGS

BN: 5.0

Title

Routing

Description

There is a need for evaluating and mapping alternate routine for a variety of functions on all roads including county, city, state and private roads. This includes the need to buffer an affected area for analysis. This would be used for emergency management, traffic control, homeland security, and Transportation construction projects. There is also a need to communicate alternate routes to the public.

Business Functions Using

Public works, Transportation construction projects, emergency management, transit organizations, military

Source

WA-Trans Business Needs Document

July 10, 2002

WSDOT Olympic Region Lacey Project Engineers Office, WSDOT Emergency Response, WSDOT Olympic Region Highway and Local Programs Engineer, WSF Terminal Engineering

Specific Partners Use

WSDOT, County and City Governments, E-911,

BN: 6.0

Title

Impervious Surfaces Analysis Data

Description

Information that facilitates calculating impervious information along existing roadways such as pavement type, surface area and other related things would assist with the impervious surface permits. There is additional data needed that may not be part of WA-Trans. This data is covered in the section of data needs from other frameworks.

Business Functions Using

Public works, Transportation construction projects

Source

WSDOT Environmental Affairs Office

Specific Partners Use

WSDOT, County and city governments

BN: 7.0

Title

Water Crossings Roadways (maybe Rails as well)

Description

Locations of water crossing on roadways including permanent and intermittent water including 100 year flows of streams and rivers. This data is used for scoping and design of highway projects. This may be considered hydro data but relates to culverts and bridges.

Business Functions Using

Public works, Transportation construction projects, environmental permitting organizations, business developers,

Source

WSDOT Environmental Affairs Office, WSDOT State Design Office

Specific Partners Use

WSDOT, County and city governments

BN: 8.0

Title

Collision Analysis using Transportation System

Description

There is a need to provide analysis of roadway collisions based upon the whole roadway system surrounding the incidents including off and on ramps, roads signals, and structures connecting to the roadway. **May involve roads and infrastructure outside of a specific jurisdiction.**

Business Functions Using

Transportation planning, emergency response

Source

WSDOT Olympic Region Highway and Local Programs Engineer

Specific Partners Use

WSDOT, MPOs, RTPOs, Public Works, Emergency Management, FHWA

July 10, 2002

BN: 9.0

Title

20-Year Transportation Plan Development

Description

Developing a 20-year plan involves using transportation plans data statewide as well as a variety of other data. This other data will be included in the data sections of this document.

Business Functions Using

Transportation planners, urban planners, private developers, government agencies, program managers

Source

WSDOT Planning, WSDOT Olympic Region Highway and Local Programs Engineer, WSF Terminal Engineering

Specific Partners Use

WSDOT, Puget Sound Regional Council, CRAB, County and city organizations

BN: 10.0

Title

Tracking Activities along Transportation Network by Organizations without Jurisdictional Responsibility

Description

The specific need identified was stated as “Knowing when and where utilities plan to work so we can combine paving efforts.” This can be extended into know plans regarding work on or alongside any transportation feature that is not being done by the organization which generally maintains that feature.

Business Functions Using

Public works, maintenance and operations organizations

Source

WSDOT Olympic Region Highway and Local Programs Engineer

Specific Partners Use

WSDOT, county public works, city public works

BN: 11.0

Title

Improvements to the Roadway

Description

This was stated as a “need to know when another agency or developer makes improvements on a state highway system. This information is captured if the improvement is connected to an interstate or if they use WSDOT to award the contract. Otherwise the information isn’t captured.” This could be extended to needing to know when ANY organization makes an improvement to ANY road on the network. This actually encompasses maintenance, accuracy and timeliness of data.

Business Functions Using

Transportation planning, scoping, design, maintenance, operations, urban planning, private business planning, emergency management, emergency response

Source

WSDOT Olympic Region Highway and Local Programs Engineer, WSDOT Transportation Data Office

Specific Partners Use

WSDOT, County and City Public Works, Puget Sound Regional Council

BN: 12.0

WA-Trans Business Needs Document

July 10, 2002

Title

Statewide Base Map to use in Communication

Description

There is a need for a statewide base map that extends beyond jurisdictional boundaries to illustrate scenic byways and provide communication for funding with the legislature, local partners, and the Federal Government.

Business Functions Using

Planning, Program Management, Public Communications

Source

WSDOT Olympic Region Highway and Local Programs Engineer, WSDOT Program Management, WSDOT Rail Office

Specific Partners Use

WSDOT, County and City Public Works, Puget Sound Regional Council

BN: 13.0

Title

Coordination of Transportation During Emergency

Description

In the Washington State Comprehensive Emergency Response Plan it is WSDOT's responsibility to coordinate all transportations (all modes, all routes) for the state. The Agency must collect information about closures and routing. During the Nisqually Quake the Governor asked for maps including alternate routes. There is a need for a method of collecting, storing and illustrating areas of closure and alternate routes. This requirement can be extended to include a mechanism for storing and communicating all closures in various situations including terrorist attacks, natural disasters or construction.

Business Functions Using

Emergency management and response, transportation maintenance and operations, transit organizations, military

Source

WSDOT Emergency Response, WSF Council for Disaster Planning

Specific Partners Use

E-911, WSDOT, county and city governments

BN: 14.0

Title

Transportation Infrastructure Vulnerability Assessment

Description

There is a need to perform vulnerability assessments on transportation infrastructure statewide based on critical risk. It must breakdown each feature by ownership, then functionality, and then relationship to other things (ex. emergency routes, etc.) It must look at multi-hazard vulnerabilities. Then an alternative analysis must be performed. WA-Trans could be the basis for such an assessment and used to continually update the assessment based on new risk models and new data.

Business Functions Using

Emergency management and response, transportation operations, transportation planning, risk management

Source

WSDOT Emergency Response, WSF Council for Disaster Planning

Specific Partners Use

WSDOT, county and city governments

BN: 15.0

WA-Trans Business Needs Document

July 10, 2002

Title

Bridge Data Statewide

Description

There is a variety of bridge data needed statewide. The WSDOT Bridge Preservation Office is federally mandated to report on bridges statewide. The extent of this mandate includes city, county, state and some privately owned bridges with public traffic. They are responsible for inspections on regular inventory, which includes big interchanges, bridges over dry gulches, other raised highways and anything over water and all tunnels. They are responsible for movables, and specialized structures such as the Narrows and floating bridges. They need to know the following about bridges:

Location of bridges and structures (tunnels, etc),

Cross streets close to bridges,

Stream or water body names,

Proximity of bridge to railroad,

Mechanism to share bridge inspection status, type, frequency, due dates,

whether navigable water, location with counties and cities,

Need structural bridge information from counties which shows up on statewide map

Need information from local governments to assist in bridge prioritization for repair or retrofit in situation of disaster (ex. earthquake) where many may need to be repaired/retrofitted at once.

Need information about egress routes into tribal lands and structures on them

Need data from Federal Government about backcountry bridges for their inventory

Business Functions Using

Public works, transportation operations and maintenance, emergency management

Source

WSDOT Bridge Preservation Office

Specific Partners Use

County and city governments, WSDOT, USGS, USFS, BLM, E-911

BN: 16.0

Title

Travel Demand Forecasting Models

Description

Travel demand forecasting is a process of building models to use in decision support. Currently MPOs build their own models. WSDOT needs to build a model that would connect to their models. It would require information on local, county and state roads, rail, air, ferry and transit routes. This would be used for long range planning. It would also be useful in analysis of "environmental justice" issues with transportation planning.

Business Functions Using

Transportation planning, urban planning, private business planning, communication

Source

WSDOT Planning Office, WSDOT Environmental Affairs Office

Specific Partners Use

County and city government, WSDOT, Puget Sound Regional Council, Transit, Strategic Freight Analysis Project, FHWA

BN: 17.0

Title

Building the Highway System Plan

WA-Trans Business Needs Document

July 10, 2002

Description

The agency builds the Washington Transportation Plan periodically. Part of it is the Highway System Plan (HSP). Developing the plan involves collecting all transportation data from all modes and identifying deficiencies based on service objectives and outcome statements. Data collected includes project information, proposals, locations, deficiencies and segments. Ideally they would like to include data collected from locals and counties so they can develop corridor plans and raw development plans. There could be land issues, modeling needs, new development needs and local transportation circulation issues that come into plan. Delay and deficiencies are measured based on all of this information and then the plan is developed.

Business Functions Using

Transportation planning, urban planning, business development planning

Source

WSDOT Planning Office

Specific Partners Use

County and city governments, WSDOT, Transit, Strategic Freight Analysis Project, Puget Sound Regional Council, FHWA

BN: 18.0

Title

Representations with bi-directional carriageways

Description

WSDOT Transportation Data Office locates features and other things along the roadway. There is currently great inaccuracy because the roadway is represented with one centerline and the actual routes that are separated and different in different directions are not accurately represented and lead to bad data when locating features and other things along the roadway. They need bi-directional carriageways with measurements in each direction.

Business Functions Using

Transportation Planning, Scoping and Preliminary Design, Communication, Transportation data collectors, Public works, Transportation maintenance and operations

Source

WSDOT Transportation Data Office

Specific Partners Use

Puget Sound Regional Council, WSDOT, city and county governments

BN: 19.0

Title

Collecting Collision Data and Locations

Description

The WSDOT Transportation Data Office collects data and performs collision reporting and tracking where collisions occur on specific highways. Eventually WSP and other police vehicles will be outfitted with GIS to report the location of collisions. Data used for analysis about problems that cause collisions.

Business Functions Using

Transportation operations, maintenance, and planning organizations, police, emergency response,

Source

WSDOT Transportation Data Office

Specific Partners Use

Washington State Patrol, WSDOT, County and city governments

July 10, 2002

BN: 20.0

Title

Providing Collision Data to Local Governments

Description

The WDOT Transportation Data Office provides traffic accident and collision data to counties. They also provide history at intersections of local and county roads with state routes. They provide data to MPOs and RTPOs for their models.

All of this sharing could be facilitated through the Transportation Framework

Business Functions Using

Transportation Planners, Public Works

Source

WSDOT Transportation Data Office

Specific Partners Use

County and city governments, WSDOT, Puget Sound Regional Council, Strategic Freight Planning

BN: 21.0

Title

Work with HPMS/FC replacement

Description

The Highway Performance Monitoring System and Functional Classification Systems are maintained by WSDOT for the FHWA. This is database of all miles of public roads in the State. It is the basis for determining eligibility for Federal-aid funding for functional classification modifications and updates as well as the basis for designation of the National Highway system. WSDOT is mandated to maintain data about all roads in both rural and urban areas and determine the functional usage of existing roads and streets. These systems get data from many of the partners that WA-Trans will. Aligning these systems with WA-Trans would prevent unnecessary duplication of data and effort.

Collecting the same data once would facilitate sharing from local governments.

There is an effort to replace them with a single system and this is where

alignment might best be facilitated.

This effort wants a functional class map, which shows all roads and road miles included in the functional classifications sent to the Federal Government.

Business Functions Using

Various levels of government transportation organizations

Source

WSDOT Transportation Data Office

Specific Partners Use

FHWA, WSDOT, County and City Governments, MPOs, RTPOs, CRAB

BN: 22.0

Title

Support the "Trip Planner" effort

Description

The WSDOT Public Transportation Office is working on an effort called "Trip Planner" that involves providing the public with information about what transportation options are available from one location to another. It involves routing, transit information and is anticipated to be web based. Eventually would become a doorstep-to-doorstop trip planner anywhere in the state. At this point they are focusing on services for people who can't drive their own cars but it will expand to a much broader base. This project depends on a statewide base map with addressing and routing for multiple modes.

Business Functions Using

WA-Trans Business Needs Document

July 10, 2002

Social Services, Chamber of Commerce, Employment organizations, Commute Trip Reduction, Transit systems

Source

WSDOT Public Transportation Office, WSDOT Transportation Demand Management Office

Specific Partners Use

Kitsap Transit, Community Transit, WSDOT

BN: 23.0

Title

Transportation Features in a Watershed

Description

Environmental analysis frequently is done on the basis of a watershed, which is not always bounded by a single transportation jurisdiction. This analysis requires all transportation features to be included. This includes footpaths, bike trails, forest roads, and other less-used transportation features.

Business Functions Using

Environmental assessment and permitting, Transportation construction programs, program management, transportation planning

Source

WSDOT Environmental Affairs Office

Specific Partners Use

County and city governments, WSDOT, WADNR

BN: 24.0

Title

Habitat Along Roadways

Description

In order to evaluate the evolution of the habitat relationship with the roadways “habitat connectivity” infrastructure may need to be part of WA-Trans.

Business Functions Using

Environmental assessment and permitting, Transportation construction programs, program management, transportation planning

Source

WSDOT Environmental Affairs Office

Specific Partners Use

County and city governments, WSDOT, WADNR

BN: 25.0

Title

Park & Rides

Description

WA-Trans should include Park & Rides, including lights and pavement conditions by location; they need data regarding Park & Rides. Need to analyze direct access to and from Park & Rides to other systems. Not all Park & Rides belong to WSDOT or are maintained by them.

Business Functions Using

Transportation planning, transit, Transportation construction programs, commute trip reduction, employment organizations

Source

WSDOT Program Management, WSDOT Urban Corridors, WSDOT Transportation Demand Management Office

Specific Partners Use

WA-Trans Business Needs Document

July 10, 2002

WSDOT, Puget Sound Regional Council, Kitsap Transit, Community Transit, county and city governments

BN: 26.0

Title

Communicating Project Plans

Description

WSDOT Urban Corridors projects have co-lead agencies. The leads are jointly responsible for the project. These projects are multi-modal. They also are sharing data with differing levels of government and different modes. Generally hiring a contractor who collects the data for scoping does data collection and then it is thrown away. There is not a place to update data. Each project costs between \$15,000 and \$20,000. Additionally there is a need to share Transportation construction project plans with the public and with developers. Providing maps with the data and showing it in relation to where they live/work has the most impact.

Business Functions Using

Transportation planning, public works, public communications, transit, program management

Source

WSDOT Urban Corridors, WSDOT Program Management

Specific Partners Use

County and city governments, WSDOT, Kitsap Transit, Community Transit, Puget Sound Regional Council

BN: 27.0

Title

Integrate Multi-modal Transportation Options

Description

This was stated as “Integrating WSF terminal data with roads, bike paths, rails, bus systems, water-based travel that leads to ferry terminal including traffic data”. And “need to be able to evaluate how arterials and ferry terminals interface with the State roadway system and how traffic is moved between them”. This need could be extended to say that all modes need to be combined for analysis of transportation patterns for transportation planning.

Business Functions Using

Transportation planning, transit

Source

WSF Terminal Engineering, WSDOT Urban Corridors

Specific Partners Use

WSDOT, Puget Sound Regional Council, County and city governments, Kitsap Transit, Community Transit

BN: 28.0

Title

Terminal planning

Description

Washington State Ferries is considered part of the state highway system. When they are looking at modifying or building a terminal they need a great deal of data. They need to know the roads and other transportation converging on a location.

Business Functions Using

Transportation planning, ferries planning

July 10, 2002

Source

WSF Terminal Engineering

Specific Partners Use

WSDOT

BN: 29.0

Title

Notification of Ferry Neighbors

Description

WSF needs address and routing information for businesses and homes around ferry terminals for notification purposes when there is closure, noise or some special transportation issue.

Business Functions Using

Washington State Ferries, Emergency Management

Source

WSF Terminal Engineering

Specific Partners Use

WSDOT

BN: 30.0

Title

Geocoding Traffic Flow

Description

WSDOT has an application on the Internet called the Puget Sound Traffic Flow Map, which gets heavy usage. It would be very good to expand the boundaries of this beyond the state highway system and show other congestion. The drivers don't care who is responsible for the road. They just want to know where to avoid.

Business Functions Using

The public

Source

WSDOT IT (TRAC) Office

Specific Partners Use

County and city road departments, WSDOT, Kitsap Transit, Community Transit

BN: 31.0

Title

Coordinated dispatch of on-demand transportation

Description

There is a need for social service providers to facilitate coordinated dispatch and scheduling for demand response rides provided for ADA individuals. There is a need to link trips on demand using a pool of different transportation providers and routes for a particular day so transportation can be arranged as needed with a single call. The idea is to provide a call center for this purpose.

Business Functions Using

Social Services, public including disabled individuals and senior citizens

Source

WSDOT Public Transportation Office

Specific Partners Use

County and city social services, WSDOT

WA-Trans Business Needs Document

July 10, 2002

Data Needs

Business needs were expressed which involved the use of this data in relationship to the transportation network across the State. These data items may not, in some cases should not, be part of WA-Trans. However WA-Trans may facilitate analysis by working with this data to assist in meeting specific business needs.

Data Category – This field is a high level category of various data elements which allows for development of “themes” of data which can be goecoded into different layers in a GIS.

Specific Data – Individual data elements, which relate to the category that stakeholders want to see in relation to the transportation network. No detail is provided about these elements at this point.

Source of Need – The original organization requesting this data with the transportation data.

Business Function – The business function which may use this data or may contribute this data.

Framework Theme – Where a framework theme in Washington State has the data within its scope it is identified here.

<i>Data Category</i>	<i>Specific Data</i>	<i>Source of Need</i>	<i>Business Function</i>	<i>Framework Theme</i>
Utilities	Gas line locations	WSDOT Project Engineers, WSDOT ITS (TRAC), WSDOT State Design Office	Transportation Construction	None
Utilities	Phone power lines	WSDOT Project Engineers, WSDOT ITS (TRAC), WSDOT State Design Office	Transportation Construction	None
Utilities	Wireless transmission	WSDOT Project Engineers, WSDOT ITS (TRAC), WSDOT State Design Office	Transportation Construction	None
Utilities	Date and location about digging	WSDOT Olympic Region H&LP Engineer	Transportation Construction and Maintenance	None
Parcel Data	Ownership along roadways, railways, ferry terminals	WSDOT Project Engineers, WSDOT Rail Office, WSDOT Bridge Preservation Office	Transportation Construction, Maintenance and Operations, Emergency Management	Cadastral
Parcel Data	Homes and businesses along projects and by ferry terminals	WSDOT Urban Corridors, WSF Terminal Engineering	Transportation Construction, Transportation Planning, Counties and Cities, Public	Cadastral
Land Use	Zoning data	WSDOT Project Engineers, WSDOT Environmental Affairs Office, WSF Terminal Engineering, WSDOT Planning Office,	Transportation Planning, Environmental Assessment, Transportation Construction, Commute Trip Reduction, Transit	None

WA-Trans Business Needs Document

July 10, 2002

Land Use	Urban Growth Boundaries	WSDOT Project Engineers, WSDOT Environmental Affairs Office, WSF Terminal Engineering, WSDOT Planning Office	Transportation Planning, Environmental Assessment, Commute Trip Reduction, Transit, Counties and Cities	None
Land Use	Boundaries of "critical areas" such as burial grounds on tribal land	WSDOT Olympic Region Design, WSDOT Environmental Affairs Office	Transportation Planning, Environmental Assessment, Transportation Construction, Counties and Cities	None
Land Use	Historic sites (historic districts, bridges, and public lands)	WSDOT Environmental Affairs Office	Transportation Planning, Environmental Assessment, Transportation Construction, Counties and Cities	None
Land Use	Community centers, school district locations and boundaries, weigh stations along roadways	WSDOT Program Management, WSDOT Design Office	Transportation Planning, Transportation Construction, Transit, Commute Trip Reduction, Counties and Cities	None
Land Use	Shore Master Permits along ferry terminals	WSF Terminal Engineering	Transportation Planning and Construction, Environmental Assessment	None
Land Use	Comprehensive along Ferry terminals	WSF Terminal Engineering	Transportation Planning and Construction, Environmental Assessment	None
Environmental	Location of well headers	WSDOT Olympic Region Design	Transportation Construction, Environmental Assessment	None
Environmental	Delineated wetlands location and buffer and environmental classification in project area or along roadway	WSDOT Olympic Region Design, WSDOT Rail Office, WSDOT Urban Corridors, WSDOT Maintenance and Operations	Transportation Construction, Environmental Assessment, Natural Resource Management	Hydrography

WA-Trans Business Needs Document

July 10, 2002

Environmental	Creek, stream, and river location and buffer and environmental classification in project area or along roadway	WSDOT Rail Office, WSDOT Urban Corridors, WSDOT Olympic Region Design, WSDOT Maintenance and Operations	Transportation Construction, Environmental Assessment, Natural Resource Management	Hydrography
Environmental	Storm water treatment facilities and conveyances	WSDOT Olympic Region Design, WSDOT Environmental Affairs Office	Transportation Construction, Environmental Assessment, private business	None
Environmental	Drainage onto and off of project area	WSDOT Environmental Affairs Office	Transportation Construction, Environmental Assessment, Natural Resource Management	Hydrography
Environmental	100 year flow of water crossings on project areas	WSDOT Environmental Affairs Office, WSDOT State Design Office	Transportation Construction, Environmental Assessment	Hydrography
Environmental	Species and natural resources around a ferry terminal	WSF Terminal Engineering	Transportation Construction, Environmental Assessment, Natural Resource Management	None
Environmental	Topographic and Bathymetric Data around ferry terminals	WSF Terminal Engineering	Transportation Construction, Natural Resource Management	Orthophoto
Economic Data	Business and Industry Locations along routes	WSDOT Planning Office, WSDOT Transportation Demand Management Office	Transportation Planning, Transit, Commute Trip Reduction, Transportation Construction, Environmental Assessment	None
Economic Data, Parcel Data, Land Use Data	Locations of social service providers, employment centers, medical care, day care providers, individuals using social services and transit routes	WSDOT Public Transportation Office	Transit, County, City, and State Social Service Providers	Cadastral (partially)

WA-Trans Business Needs Document

July 10, 2002

Transportation Data	Road signal locations	WSDOT Olympic Region H&LP Engineer	Transportation Planning, Transportation Construction, Transit, Route Planners, Emergency Management, Counties and Cities	None
Transportation Data	Structures involved in collisions	WSDOT Olympic Region H&LP Engineer	Counties and Cities Transportation Planning, Transportation Construction, County and Cities	None
Transportation Data	Collision locations	WSDOT Planning Office, WSDOT Transportation Data Office	Transportation Planning, County and Cities	None
Transportation Data	Various structures on county and cities roads (tunnels, bridges)	WSDOT Bridge Preservation Office	Counties, Cities, Emergency Management, Transportation Planning, Freight	None
Transportation Data	Traffic data for all modes including walking, bus, rails, water based travel, bikes	WSDOT Urban Corridors, WSF Terminal Engineering, WSDOT Transportation Demand Management Office	Transportation Planning, Transportation Construction, Cities and Counties	None
Transportation Data	Pedestrian accident location data including: route location, road condition, traffic volume, speed, marked and unmarked cross walks, driveway locations, types of injury, medians, left turn lanes	WSDOT Highways and Local Programs	Transportation Planning, Cities and Counties, Transportation Maintenance and Operations	None
Transportation Data	ownership of lines Railroad crossing data including: safety rating, status of rail line at crossing (active, inactive) rate of train crossing, time of day of crossings, average daily traffic at crossings, Population of communities through which state highways pass.	WSDOT Rail Office, WSDOT Bridge Office	Transportation Planning, Transportation Maintenance and Operations, Freight, Counties, Cities, Emergency Management	None
Census	Population of communities through which state highways pass.	WSDOT State Design Office,	Transportation Planning, Transportation Construction	None